

LOFMARK

Appl. No. 09/768,217

March 26, 2004

**REMARKS/ARGUMENTS**

Reexamination of the captioned application is respectfully requested.

**A. SUMMARY OF THIS AMENDMENT**

By the current amendment, Applicants basically:

1. Editorially amend the specification.
2. Thank the Examiner for the allowance of claims 19-22.
3. Thank the Examiner for the indication of allowable subject matter in claims 4-18 and 25-29.
4. Provide Proposed Drawing Changes to amend Fig. 14 to include therein English language step descriptions, such descriptions being amply supported by the specification text extending from page 22 to page 25.
5. Editorially amend claims 1, 3, 4, 8-10 and 23-24, the amendments not being prompted by prior art or patentability concerns (as evidenced by the non-pertinence of the sole applied referenced as discussed in §B infra).
6. Cancel claim 2 without prejudice or disclaimer.
7. Respectfully traverse all prior art rejections.

**B. PATENTABILITY OF THE CLAIMS**

Claims 1-3, 23 and 24 stand rejected under 35 USC 102(e) as being anticipated by U.S. Patent 6,477,249 to Williamson et al (see enumerated paragraph 2 of the Office Action). All prior art rejections are respectfully traversed.

Claim 1 concerns a filter for filtering signals in a telecommunications system, which filter is passive and has a complex characteristic impedance which at least approximately matches a predetermined complex impedance. The filter comprises a

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resistance which is chosen such that it assists in giving the filter its said complex characteristic impedance.

Williamson (United States Patent 6,477,249) describes a splitter filter comprising a low-pass filter of which the filtering properties can be varied between two different states depending on whether it is speech traffic or signaling traffic that pass through the filter. There is no disclosure or indication in Williamson that the filter could comprise a resistance that is chosen such that it assists in giving the filter a complex characteristic impedance. Thus claim 1 is novel in view of Williamson.

Claim 1 solves the problem of obtaining a filter, which both achieves a good impedance match to a transmission line, or a similar complex impedance, and which at the same time is passive. In the Office Action it is stated that Williamson is considered to show a low-pass filter with a complex characteristic impedance which can achieve a good impedance matching to the complex impedance of a transmission line. The applicant respectfully disagrees with this statement. The applicant is of the opinion that Williamson shows a passive filter and that Williamson discusses the importance of impedance matching to the complex impedance of a transmission line, but there is nothing that indicates that the filter disclosed in Williamson actually has a complex characteristic impedance. What is being said in Williamson concerning impedance matching is that they use a filter of low order which transforms the impedance less than a filter of higher order (see column 6, line 66 - column 7, line 4). Furthermore it is mentioned in column 6, lines 22-25 that the requirement for low loss requires the use of lossless reactive components (inductors and capacitors), which gives the filter a purely resistive impedance. Examples of filters are shown in Fig. 8 and Figs. 11-13. In Figs. 9A and 9B filters are shown, which are equivalents to the filter in Fig. 8 in different states. All of these arrangements have resistive impedance. As it is stated in Williamson the filters

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merely comprise inductors and capacitors, which are reactive components and give the filter a resistive characteristic impedance.

In column 3, lines 17-19 it is disclosed that the low-pass filter of Williamson can be made passive. In column 6, lines 31-35 it is discussed that it is a desire that the filter have a complex characteristic impedance. However, at the same time Williamson also states, as mentioned above, in column 6, lines 22-25, that the requirement for low loss requires the use of lossless reactive components (inductors and capacitors), which gives the filter a purely resistive impedance. The applicant is of the opinion that the interpretation in the Office Action regarding what Williamson discloses is erroneous since the discussion in Williamson regarding impedance matching to a complex impedance is interpreted as if Williamson actually provides a filter with a complex impedance. It rather appears that an adequate impedance matching to a complex impedance is obtained in Williamson by using a filter of low order with a resistive characteristic impedance. Williamson discusses the need for a complex impedance but at the same time points out that this is incompatible with other requirements. It appears that the best possible compromise is achieved in Williamson by a filter of low order with a resistive characteristic impedance, which filters speech traffic and gives an impedance matching that is satisfactory. However, since the filter has such a low order, its filtering properties are not enough for filtering signaling traffic. Therefore the filter is combined with a filter of higher order having resistive characteristic impedance, such that filtering properties are achieved that vary depending on the type of traffic.

Applicant solves the above mentioned problem by providing a filter with a truly complex characteristic impedance, not only a resistive impedance that provides a satisfactory impedance matching. The complex impedance of the filter according to claim 1 is achieved by means of a resistance that is chosen such that it assists in give the filter its said complex characteristic impedance. In cases where impedance matching to the

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impedance of a transmission line or a similar complex impedance is to be achieved, it is desirable that the characteristic impedance of the filter also is complex in order to obtain the best possible impedance match. Thus a particularly good impedance match can be obtained by means of the filter according to claim 1. Since Williamson firstly does not disclose a passive filter with a complex impedance and secondly does not disclose any resistance in a filter that is chosen to give the a complex characteristic impedance, the applicant is of the opinion that is would not be obvious to the person skilled in the art to arrive at a solution according to claim 1 when reading Williamson and facing the above mentioned problem.

Claim 22 is a method claim that corresponds to amended claim 1. Accordingly, claim 22 is also considered to be novel and have an inventive step for the same reasons as stated above for claim 1.

### **C. MISCELLANEOUS**

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application, including but not limited to any additional claims fees, any extension of time fees, and an IDS fees.

Should the Examiner feel that an interview with the undersigned would Facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

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Respectfully submitted,

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